

# Alameda County Sheriff's Office

Office of Homeland Security and Emergency Services  
4985 Broder Boulevard, Dublin, CA 94568-3309



**Gregory J. Ahern, Sheriff**

Director of Emergency Services  
Coroner - Marshal

## MEMORANDUM

DATE: July 20, 2012

TO: Anti-Terrorism Approval Authority

FROM: Tom Madigan, Captain *Tm # 832*

SUBJECT: Homeland Security Grant Request for FY2012

The Alameda County Sheriff's Office (ACSO), Office of Homeland Security and Emergency Services (OHSES) seeking funding for an Unmanned Aerial System (UAS) known as a Dragon Fly. An Unmanned Aerial System consists of the unmanned aircraft, the control system, a control link and other related support equipment. Unmanned aerial systems save money, enhance safety, save lives, and can be utilized across a myriad of public safety disciplines to include the Homeland Security Arena. The system will be equipped with live video downlink and Forward Looking Infrared (FLIR). I have consulted with subject matter experts in SWAT, EOD, Fire, and EMS to get their valuable feedback. Each of the disciplines consulted concur that a UAS would be a valuable asset to the operational area.

The Alameda County Office of Homeland Security and Emergency Services maintains a volunteer Air Squadron with 20 pilots who would be trained to deploy the UAS. Due to FAA regulations to include the United States airspace system's classification scheme, licensed pilots would deploy the UAS. These volunteers are on-call 24/7 to respond to areas within Alameda County to deploy the UAS upon request.

ACSO is designated as a First Responder to terrorist related events and is the Law Enforcement Mutual Aid Coordinator for Region II. Additionally, at no cost to cities within the county, ACSO has provided an Explosive Ordnance Team to respond to EOD related activities. This UAS can enhance our ability to respond throughout the region. The UAS can be deployed near critical infrastructure and provide real-time situational analysis for first responders. In the aftermath of a terrorist related event, the UAS can provide live camera feed to assist with direction of first responders and damage assessment.

The ACSO maintains a volunteer Search and Rescue Team (SAR). The SAR team responds throughout the county and the region to assist in locating missing persons. The UAS can enhance their ability to locate missing persons.

After consulting with subject matter experts on the Explosive Ordnance Disposal Team, a Regional Type I Team, a UAS will allow EOD to conduct forward reconnaissance to determine evacuation routes' locations expeditiously. It will also allow EOD to determine nearby critical infrastructure quickly to determine if the area can withstand a high order detonation. EOD will also have real time information as to types of structures (glass, concrete, wood, etc.) that are located nearby potential explosive devices and assist in the decision making process whether to move a device or blow it up in place.

After consulting with a subject matter expert from Fire Service, I learned there are many times when aerial views of scenes would be very beneficial to the incident commander. The Fire Service could use the UAS to provide an aerial platform for wildland and structure fires, and HazMat incidents. The FLIR can be used to seek out hot spots in wildland fires. The UAS can be used for aerial overviews in non emergency situations to evaluate terrain and fuel loading in wildland areas. The UAS can also provide real time damage assessments after a major disaster. These are a few specific to the Fire Service, however, there is significant overlap for all the public safety disciplines.

The Alameda County Tactical Commanders were consulted, a regional group of SWAT team Commanders throughout the County of Alameda. A UAS would be valuable to assist with barricaded suspects, surveillance (investigative and tactical), perimeters, intelligence gathering, rough terrain, suspicious persons, large crowd control disturbances, etc. In the event of a terrorist attack, the UAS can assist with crime scene preservation as well as accident scene photos.

The vehicle can be utilized during the full-scale exercise known as Urban Shield.

The UAS is allowable under the AEL Number: 030E-07-RPVS titled Vehicles, Remotely Piloted, and satisfies the Bay Area Security Goals and Objectives to enhance infrastructure protection capabilities, enhance medical preparedness, enhance recovery capabilities, and enhance Homeland Security exercises. Relative to the target capabilities, a UAS assists with information gathering, intelligence analysis, counter-terrorism investigation and law enforcement, critical infrastructure protection, on-site scene management, structural damage assessment, and fire incident response. The cost for one Dragon Fly UAS with live video downlink and FLIR is \$30,000.00.